infection of the adjacent lymph glands takes place, the removal of the pylorus would seem to be the rational course. This opens up the question of the advisability of operation in previously healthy persons whose dyspeptic symptoms begin after the age of 40 or 50, and who show signs of pyloric irritation, while the gastric contents contain abundance, even excess, of hydrochloric acid. These cases are so frequently malignant that an early operation seems not only justified but advisable.

In a man, aged 53, whom I saw some years ago there was much distress after meals apparently due to hyperchlorhydria. Treatment gave relief and he regained both his normal weight and strength, but the gastric symptoms recurred from time to time. I then lost sight of him. Between two and three years later his distress became continuous and after some months he died with unmistakable evidences of carcinoma of the stomach.

In more advanced cases in whom removal of the pylorus is not feasible, gastro-enterostomy is often followed by very gratifying improvement, only temporary of course, but then improvement in any disease and even cure is only temporary.

A few years ago a man under my care in the hospital had marked pyloric obstruction with pain, vomiting, and much weakness. Gastro-enterostomy was done and followed by great improvement. His appetite returned, digestion became comfortable, his former weight was regained and the cachectic colour disappeared. He was for some months able to resume his former occupation. Gradually the malignant masses increased in size and the disease invaded the gastric walls, in time occluding the artificial opening. The growth filled and caused protrusion of the upper zone of the abdomen. At the necropsy there was not sufficient healthy stomach remaining to permit of a second gastro-enterostomy being done.

In a similar case under the care of the late Dr. L. MacFarlane, complete relief of symptoms followed gastro-enterostomy, even free hydrochloric acid returning to the gastric secretion. The man lived about a year of comfortable, useful life before death took place.

REFERENCE.

¹ *Nothnagel's Encyclopaedia*, American Edition: Diseases of the Stomach, p. 309.

A REVIEW OF A SERIES OF OPERATIONS FOR CANCER OF THE STOMACH.*

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SINCE my first case on August 23rd, 1897, up to July 1st, 1905, I have operated upon 59 cases of cancer of the stomach. The operations practised have been as follows:

<i>Gastro-enterostomy</i> ...	35 cases, with 5 deaths
Anterior (all with Murphy's button) ...	7 cases, 2 deaths
Posterior (all with suture) ...	28 cases, 3 deaths
<i>Gastrectomy</i> ...	10 cases, with 3 deaths
Complete ...	1 case, 1 death
Partial ...	7 cases, 1 death
Partial, with resection of transverse colon ...	2 cases, 1 death
<i>Gastrostomy</i> , for carcinoma at cardiac end of the stomach ...	5 cases, 0 death
<i>Jejunostomy</i> ...	3 cases, with 0 death
<i>Exploratory laparotomy</i> (operation not necessary or not possible) ...	6 cases, 1 death

During the same period I have seen 11 patients suffering from cancer of the stomach in so advanced a stage that I have advised against operation. One of these patients was operated upon elsewhere, and died six hours after gastro-enterostomy had been performed; of the remaining 10, 9 lived for periods varying from three weeks to fourteen weeks, in 1 no further history was obtained.

I propose to discuss the cases in the order already given.

GASTRO-ENTEROSTOMY.

In the earlier cases I used the Murphy button, and performed the anterior operation. There were 7 cases and 2 deaths, 1 from shock and exhaustion in a very enfeebled and wasted patient, 1 from continued vomiting and exhaustion.

In the later cases I have performed the posterior operation by simple suture in the manner I have described in detail in my work on *Abdominal Operations*. There were 28 cases with 3 deaths, 1 from pneumonia, 1 from shock or exhaustion, and 1 from septic peritonitis.

The value of the operation of gastro-enterostomy in malignant disease of the stomach has been variously estimated by surgeons. Recently a well-known London surgeon pronounced unhesitatingly against it in all cases; other surgeons are accustomed to practise it in all cases in which irremovable malignant disease is encountered. It has seemed to me that the indication for the operation is perfectly clear; it should be performed when obstruction to the food is caused (or is likely to be caused in its increase) by an irremovable growth at the pylorus, or in the body of the stomach near the pylorus. If no obstruction is caused, gastro-enterostomy is not indicated, and will not give, if performed, a degree of relief commensurate with the risks of the operation, though some temporary improvement may be noticed. If there is obstruction due to a growth which can be removed, gastro-enterostomy alone should not be performed unless the condition of the patient is such that the more serious operation of partial gastrectomy is not permissible. In such circumstances gastro-enterostomy may be performed, and two or three weeks later, when the patient's condition may be much improved, the removal of the growth can be safely undertaken. A growth is considered irremovable when it is adherent over a large area to the pancreas (the result of injury to which is most serious), or when extensive adhesions, the presence of many enlarged fixed glands, or secondary deposits in the liver or parietal peritoneum, or elsewhere, make its complete eradication quite impossible. The extent of the growth in the stomach only and the enlargement of the glands along the curvature are negligible factors so far as the question of removal is concerned, for both are conditions surmountable by the operation which I now adopt.

A tumour growing on the lesser curvature well away from the pylorus may by its increase in size cause obstruction to the food. Gastro-enterostomy in such cases gives some measure of relief, though by no means so much as when the obstruction is due to an invasion of the pylorus.

The contrary to the rule mentioned is also in need of emphasis; it is that if obstruction is not caused, or is not likely to be caused, by the growth in its extension, the operation of gastro-enterostomy should not be performed; for the absence of obstruction implies that there is a free passage through the stomach to the duodenum; the making of a new opening is therefore clearly not necessary.

Duration of Life after Gastro-enterostomy.

I have not been able to trace the final stages in the history of all my cases. Of the 30 patients who survived operation, 20 have been traced to the time of their death, 6 are alive and well, of 4 nothing is known. The earliest death amongst these occurred in the fourteenth week after operation, the latest two years and four months after operation. The length of life in the series is as follows: Fourteen weeks, fifteen weeks, eighteen weeks, five months, five and a half months, six months, 1 between six and seven months, 2 between seven and eight months, 2 between eight and nine months, 3 between nine and twelve months, 2 between twelve and eighteen months, 2 between eighteen months and two years, 2 over two years. The patient who survived longest was a woman upon whom I operated on June 13th, 1902, with Dr. Norman Porritt, of Huddersfield. Writing to me on October 27th, 1904, Dr. Porritt said:

You found pyloric enlargement and enlarged glands, and at the operation expressed the opinion that the case was one of malignant disease. The immediate recovery from the operation was very satisfactory, but convalescence was slow, and oedema of the legs coming on seemed to confirm the correctness of your opinion as to the nature of the case. But the patient went to Blackpool, and came back a different woman, and has been in first-class health until about five or six months ago. The leg oedema quite disappeared. About five or six months since she began to lose flesh and condition, a tumour appeared in the middle of the lower part of the epigastrium, and the patient went downhill, and died from malignant disease of the stomach two days ago.

Of the 6 patients who are still alive, I was operated

* A paper read before the Clinical Society of London, February 9th, 1905.

upon thirteen months ago, and 5 within the last twelve months.

A question in reference to these patients that has to receive an answer is this: Is it worth the patient's while to have the operation done? I should answer without hesitation, Yes. For in all such cases death is imminent and the remnant of life would be intolerable from constant vomiting, gastric intolerance, and the complete inability to take or enjoy food in satisfying quantities. By the operation of gastro-enterostomy life is undoubtedly prolonged, and, what is of far greater consequence, the last weeks or months of life are rendered tolerable. Food can be taken in fair and sufficient quantity and can be enjoyed; there is no stasis of food and there is no vomiting. Death occurs from gradual exhaustion, and ascites with or without jaundice may be a feature of the terminal condition.

GASTRECTOMY.

In the 9 cases in which partial gastrectomy was done, the growth was either "pyloric" or "prepyloric" in all. The tumour was largest at or near the pylorus, and thence had spread to the curvatures—to the lesser curvature in 7, to the greater curvature in 2. In the 7 former the lesser curvature was palpably affected in a considerable part of its extent, and the coronary glands were also enlarged; in the 2 latter the growth had spread very much more extensively along the greater curvatures, and had puckered up the transverse mesocolon and invaded the transverse colon, or caused its stenosis by kinking. In all the cases partial gastrectomy was performed—in the first 2 by the method I described before the Clinical Society of London in November, 1901, in the remaining 7 by the slight but important modification of it suggested by Hartmann. Of the 9 cases, 2 died within a week of the operation, 1 in a few hours, 1 in three and a half days. Of the remaining 7, 1 has lived four and a half years and is quite well and free from recurrence, 1 died in eleven months with ascites, 1 in fourteen months with secondary growths in the liver and jaundice and ascites, and 4 are still alive, the operation having been performed at dates distant between two and a half years and five months.

I have been perhaps rather conservative in my application of the operation of partial gastrectomy, and I am strongly disposed to think that if some of my earlier cases were to do again I should perform this operation in preference to gastro-enterostomy. With the method of operation described in my work on *Abdominal Operations*, there is but little loss of blood, there is no undue exposure of viscera, there is no soiling of the peritoneum, and the risks are accordingly much reduced from what they were even five years ago. We should, therefore, be emboldened to a free removal of cancer of the stomach in all cases where secondary deposits are not obvious. My cases are too few to afford a profitable comparison with those in which gastro-enterostomy has been performed, in so far as concerns the duration of life, but there is clearly a very decided gain in length of days after the removal of the growth. Indeed the question may well be raised as to whether in selected cases the operation of gastrectomy is not more satisfactory as a palliative operation than gastro-enterostomy, for its risk is very slightly greater, and by it the patient is rid of a growth which is giving rise to a continuous lymphatic infection. By removal of the growth, the dose, so to speak, of cancer is temporarily lessened.

In one patient complete gastrectomy was performed with a fatal result. I have elsewhere described this case in detail, and need not do more now than express my opinion that the operation is one which has a legitimate place in surgery, and is not merely a brilliant piece of surgical gymnastics. There is no doubt whatever about the fact that the whole of the stomach may be involved by a growth which has given rise to no secondary deposits; a growth which can, therefore, be entirely removed. In my paper in the *BRITISH MEDICAL JOURNAL*, 1903, vol. ii, p. 1458, all the recorded cases are collected.

GASTROSTOMY.

In all cases the growth was at or near the cardiac orifice of the stomach, and was causing stenosis. It is possible that in 3 of these, at least, the growth was primarily oesophageal, the cardia being affected by extension downwards of the disease. The operation was performed by

Senn's method in 4, by Frank's method in 1. The patients lived 5 months, 5½ months, 7 months, 8 months, and 17 months after operation.

JEJUNOSTOMY.

The method adopted was a modification of Witzel's, described by me in the *BRITISH MEDICAL JOURNAL*, 1902, vol. i, p. 1599. The patients lived 4½ weeks, 8 weeks, and 11 weeks after operation.

In all these cases the stomach was so extensively involved that gastro-enterostomy was impossible, and the presence of secondary nodules in the liver or in the peritoneum put away any thought of excision.

The prolongation of life for 11 weeks in one case was a matter of considerable moment, the man being able to settle some affairs of the highest importance with his son, who at the time of the operation was in South Africa. But for the operation the patient could hardly have lived a fortnight.

EXPLORATORY LAPAROTOMY.

The opinion is, I fear, too often expressed that an exploratory operation in suspected cancer of the stomach "to confirm the diagnosis" is almost entirely devoid of risk. This is far from being the case. In order to determine with accuracy the extent of the growth, and to know with certainty the possibility or otherwise of its removal, an incision 3 in. or 4 in. in length is necessary, and the hand must be passed within the abdomen. People who have obvious cancer of the stomach are often enfeebled, advanced in years, and possessed of but little reserve of strength. An exploratory operation is therefore in itself a matter of some gravity, and must not be heedlessly performed.

The incision which admits one finger only is enough for the very late or for the very early cases, but there are many cases lying between these extremes where a close scrutiny of the parts is necessary before an accurate decision for or against operation is possible.

Duration of Life after Exploratory Operations.

The exploratory operation has had, in two cases, a very marked and unexpected result. The symptoms of pain and distaste for food, or inability to take food, disappeared almost entirely for periods of two months and two and a half months respectively. The patients expressed themselves as feeling much relieved by the operation, and were able to take food better. The longest duration of life after exploration was just under seven months.

NON-MALIGNANT GROWTHS.

In addition to the cases already discussed, I have operated three times for growths (in 2 at the pylorus, in 1 at the centre of the stomach) which I considered to be malignant, but which have been proved by their subsequent course to be simple in character. One of the cases was operated upon in June, 1900 (a patient sent to me by Dr. Clarke, of Doncaster), and the other in January, 1901 (a patient sent by Dr. La Touche, of Ossett). A case of hour-glass stomach due to supposed malignant growth in the body of the organ was operated upon in June, 1901 (sent to me by Dr. Crawford Watson, of Harrogate; subsequently under the care of Dr. Selkirk, of Boston Spa). These are 3 cases, therefore, in which simple inflammatory masses were mistaken for cancerous growths. In 1 case I have made the opposite mistake, a malignant growth being looked upon as a simple one. This patient lived fourteen months after operation, and died with ascites. A *post-mortem* examination was made, and a large mass of cancer at the pylorus, with many secondary masses in the liver, discovered.

COMMENTARY.

A study of this series of cases has elicited several interesting facts.

With regard, first, to the position of the growth. In all the cases of gastrostomy for disease of the stomach, 5 in number, the growth was at the cardiac end, and had spread thence to a varying extent towards the body of the stomach, chiefly along the lesser curvature, where the glands also were implicated.

In 1 case of partial gastrectomy the growth was in the body of the stomach, and had caused the organ to be of an hour-glass form.

In all the remaining cases of partial gastrectomy and in all the cases of gastro-enterostomy, the growth was situated within 3 in. of the pylorus. Two types of growth were here recognized which may be called "pyloric" and "prepyloric." In the "pyloric" growths the disease had begun in the pylorus, or at least within a very short distance of it, and had early caused a constriction at that part. The tumour, as a rule, was comparatively small, was largest at the pylorus, and gradually tailed off along the curvatures, chiefly along the lesser curvature. The growth along the lesser curvature in two of the cases extended almost to the oesophagus. In all the cases there was enlargement of the glands; in the earlier records there is no exact statement as to their position, "enlarged glands" only being written. In the later records it is said that the glands were chiefly along the lesser curvature.

In two cases the extension of the growth which involved both curvatures had affected the greater to a more marked degree, and as a result the transverse colon and its mesentery were involved in the growth. Such involvement is not specially serious from the point of view of removal of the growth, for a resection of the colon can be performed at the same time as the removal of the stomach.

The "prepyloric" form of growth began almost always at the same point—on the lesser curvature about 1½ in. to 2½ in. from the pylorus. The growth seems to spread from here along the curvature in both directions but chiefly away from the pylorus, drifting along with the lymphatic stream. It was therefore some little time before the pylorus itself was involved, or before there was such increase in the size of the growth as to determine obstruction. This form of growth presented in almost all cases the same features. Its origin, as indicated by the thickest part of it, was at the lesser curvature; from here the growth spread along the curvature, and, to a less extent, down both anterior and posterior walls. Two wings of growth, as it were, were hinged on to a body which was longer than either, thicker in the middle and tapering towards each end. The centre of the growth was often deeply puckered, white, and "gritty"; the rest of it was smooth but intensely hard.

The symptoms in the two forms of growth—"pyloric" and "prepyloric"—differ to a degree which should make their recognition before operation a matter of little or no difficulty. In the pyloric form the symptoms from the outset are of an obstructive character; there is stasis of food, inability to take solids, and vomiting in quantities which increase with the increasing capacity of the stomach. In these cases the stomach is obviously dilated, and waves of peristalsis are easily seen or easily elicited by slight inflation of the stomach. A growth, placed as these are, need not be of large size to cause the most marked symptoms. It does not require a large mass to block the pylorus effectively.

In the "prepyloric" form the symptoms are not obstructive in the earlier stages; it is only when the pylorus is invaded, or the large size of the growth blocks the narrow pyloric antrum, that there is any impediment to the onward passage of food. Before this time the symptoms are loss of appetite, intolerance of solid food, uneasiness after meals, occasional vomiting of a turbid watery fluid in small quantities, and loss of weight. These symptoms are all mentioned in the history of my cases, though any one or more, or even all, of them may be absent in any individual patient. In two of the cases a diagnosis of "anaemia" had suggested the treatment that was adopted for two and three months. An anaemia without obvious cause in a patient of 50 years of age or thereabouts should create a suspicion as to its dependence upon malignant disease somewhere within the abdomen; not improbably in the stomach.

In the cases where an exploratory operation only was performed, the growth was, with one exception, most marked along the curvatures; on the lesser curvature in three, on the greater in two; in one the greater part of the stomach was involved. In all the mass was large, very much larger than had been supposed before the abdomen was opened. The reason in these cases for not performing gastro-enterostomy was that no obstruction was caused, and therefore such an operation could not afford much relief; the reasons against the performance of partial gastrectomy were that there were many

enlarged glands, which were irremovable, or secondary deposits in the liver, or intimate adhesion to the pancreas.

PREVIOUS HISTORY OF GASTRIC ULCER.

In the last 22 cases of gastro-enterostomy by simple suture, a close inquiry was made into details of previous history in respect of gastric ulcer; of the earlier cases I have very few historic details; the interest of the notes then taken lies chiefly in the details of technique. The result, I find, is that of the 22 patients, 16 either gave a history of an illness which had been called "ulcerated stomach" or "gastric ulcer" by the medical man who then attended, or they spoke of having "always had indigestion." In 2 cases, a history of chronic indigestion extending over more than twenty-five years was given. In one of these, an operation had been performed eighteen years before by Mr. McGill for a perigastric abscess; from the condition disclosed by the operation I performed, it was quite clear that there had been a sub-acute perforation of an ulcer near the pylorus, and on the lesser curvature.

The evidence, then, in this last series of cases goes to show that in 16 out of the 22 patients—equivalent to 72.1 per cent.—there had been gastric ulcer many years before. The shortest interval between the "attack" of gastric ulcer, and the onset of the symptoms which led to my seeing the patient for a condition which proved malignant was three years; the longest interval was twenty-six years.

On the other hand, there were 2 patients who gave a history of less than three months' duration; in both malignant disease already far advanced was discovered. Up to the time of the somewhat brusque onset of symptoms there had never been any suspicion or hint of abdominal disease. One of these cases offered an undoubted instance of *ulcus carcinomatosum*, one edge of an ulcer being affected by a large mass of exuberant carcinomatous growth.

With regard to the existence of gastric ulcer as a precursor of malignant disease in the remaining cases, my records show that in 9 cases of gastrectomy there were 6 with such a history; in 3 cases of jejunostomy 1 case; in 6 cases of exploration 3 cases; and in 5 cases of gastrostomy 1 case.

Thus, in the whole series of cases a previous history of gastric ulcer was noted as follows:

Of gastro-enterostomy there were 22 cases—16 giving such a history	
Of gastrectomy	9 " 6 "
Of jejunostomy	3 " 1 "
Of gastrostomy	5 " 1 "
	39 24

Inquiry was either not made in the earliest cases, or no mention is recorded of any such history being elicited.

I have elsewhere¹ dealt with the subject of *ulcus carcinomatosum* in detail. The sequence of gastric ulcer and carcinoma, so far as clinical evidence can support it, seems to be definitely established in more than half the total number of cases that come to surgical treatment. Analogy is, perhaps, the worst argument in surgery, but one cannot refrain from citing the similar circumstances occurring in the case of the tongue. Carcinoma rarely develops in a tongue which is otherwise healthy. In almost every instance cancer is only a local exaggeration of, or a later change in, an unhealthy condition of things distributed over other parts, or over the whole, of the tongue. Evidence of present chronic superficial glossitis, of former ulceration, or "cracking" of the tongue are frequent, if not constant.

Evidence of a like kind to this is difficult to obtain in the case of the stomach; by the time the specimen is submitted to examination after removal by operation, or after death, the growth is so extensive as to obliterate, or at the least to hide, the scars of older lesions. Nevertheless, a not inconsiderable number of specimens have been obtained, showing a chronic ulcer, which, at its edge, is undergoing a cancerous transformation, the cancer being clearly of later date than the ulcer. This condition of "*ulcus carcinomatosum*," the grafting of cancer upon ulcer, is recognizable pathologically in but a small proportion of cases; the clinical evidence suggests that it is not unlikely that it is the most common form of cancer of the stomach. This is assuming, of course, that the term

"ulcus carcinomatosum" is held to include all cases in which chronic inflammatory conditions are the local precursors and excitants of carcinomatous changes.

It is interesting to note that the two conditions, ulcer and cancer, affect the various portions of the stomach with approximately the same frequency. The "ulcer-bearing area" of the stomach is the pylorus with the pyloric antrum, and it is here that cancer is most commonly found. This part of the stomach is certainly that upon which the greatest stress is thrown during digestion. It is the most muscular part of the stomach, the "grinder" as it has been aptly called, and it is therefore more subject to the pressure and irritation of passing food than any other part of the organ.

DURATION OF LIFE AFTER OPERATION.

Of all the cases, 70 in number, that I have seen, only 1 has survived a period of four years from the time of the discovery of the disease. The records of cancer in any of the organs of the body surgically accessible are saddening enough, but I doubt whether a statement so deplorable can truthfully be made about any of them. Now, it cannot be said that there is anything specially vicious in cancer of the stomach as contrasted with that occurring in other organs. For we know that the *post-mortem* examination of one dead of cancer of the stomach sometimes discloses the fact that the disease has not spread beyond the stomach, that there are no secondary deposits in the liver or elsewhere, and that there is no involvement of other parts, such as the pancreas or colon, by direct extension. The origin and early development of cancer of the stomach are certainly insidious, but the growth is not usually rapid, and the involvement of the parts to an extent which excludes the possibility of removal by operation is probably tardy. What are the conditions, therefore, which make our treatment of the disease so ineffective?

I believe that the faults in our attitude towards this disease lie in two directions. In the first place diagnosis is not made at a sufficiently early stage, and in the second we have too often been contented with merely palliative operations instead of attempting the removal of the growth; and, further, when removal has been undertaken, the operation practised has not been based, as successful operations in malignant disease wherever occurring must be based, upon a knowledge of the anatomy of the organ involved, especially so far as its lymphatic distribution is concerned.

We have heard much in recent years of the problem of the early diagnosis of cancer of the stomach; but, in spite of much labour and much discussion, no significant advance has been made in our power of a timely recognition of the disease. A close study of the history of the patients in my series and in the other records with which I have made myself acquainted leaves me convinced that even with our present methods earlier recognition and radical surgical treatment based thereupon should be far more frequent than at present.

The type-history of a case of carcinoma is as follows: A man or woman of middle age has suffered for a few or for many years from indigestion, pain after food, vomiting, and inability to take the ordinary food in ordinary quantity; these symptoms have, it may be, come on in "attacks," in the intervals of which there has been comparative or complete freedom from suffering. At last an "attack" comes that is more rebellious than the other, vomiting is more persistent, and the loss of weight is unusual. The remedies which before gave relief are now without effect. If in such a patient there be gastric stasis, food being retained for ten or twelve hours, if there be persistent absence of free HCl after a test meal, if lactic acid be present, and if in the test meal when removed blood is found on microscopic examination, then there is a very strong warrant for a diagnosis of carcinoma, and an exploratory operation is not only justified, it is demanded. What I have said already with regard to exploration applies only to the late case; for the discovery of the early condition exploration would be of insignificant risk. In discussing this question of exploration it is well to be clear. There can be no question that an exploratory operation is a confession of diagnostic failure; we do not explore the abdomen for conditions which we can now diagnose with certainty, conditions, it may be, which 20 years ago we were

not capable of recognizing with precision, conditions such as duodenal ulcer or stone in the common duct. But no one would hesitate to say that positive recognition of cancer of the stomach in its early stage—in the stage, that is, when it could be completely eradicated—is, with present clinical methods, almost impossible. If so it should be frankly admitted, and the only certain method—exploratory operation—be vindicated. If the clinical history of a case is such that suspicions created at the first are not quickly allayed, then the abdomen should be opened to enable a diagnosis to be made. Exploration should be used for the purpose of *making*, not with the object of *confirming*, a diagnosis. It is probable that, as in other matters, the comparison of the history and of the conditions revealed at operation will lead by degrees to greater assurance in our diagnosis. Before an exploratory operation is sanctioned, however, the clinical investigation should be as complete as it is possible to make it.

POSTSCRIPT.

Between July 1st and December 31st, 1905, I have in addition operated upon 8 cases of carcinoma of the stomach. Gastro-enterostomy was performed 6 times; all the patients recovered. Gastro-enterostomy, followed by gastrectomy, once, successfully. Exploration once, the patient recovering. In 6 of these the growth was at or near the pylorus, and formed an obstruction to the onward flow of the gastric contents; posterior gastro-jejunostomy was therefore performed. Three cases had already developed secondary growths; in 1 the patient's severe condition rendered the more radical operation unwarrantable, though the local conditions appeared favourable for excision; in 2 the extent of the growth and the number of adhesions prevented, in the patient's bad condition, any radical operation. In one case the gastro-enterostomy was made well away from the pylorus, and on the twenty-fifth day partial gastrectomy was performed. In one case the patient was found to have a growth of considerable extent involving the lesser curvature in its cardiac half, and adherent posteriorly to the pancreas. There being no pyloric obstruction, the abdomen was closed without further interference. This patient died in the tenth week after operation. Of the remaining patients, two have since died, one two months after operation; in his later days he suffered a good deal of pain, owing to the formation of numerous metastases, but to within a week of the end he was able to take food fairly well. The second patient died three and a half months after operation, with jaundice and ascites. The remaining patients are alive and in fair health. The histories of four patients suggest the previous existence of an ulcer, upon which the terminal disease was engrafted.

In my first series of cases I have omitted to mention one case of carcinoma of the stomach in which perforation occurred. The opening was closed by suture and a flap of omentum stitched over; gastro-enterostomy was then performed. The patient recovered and is still living, eighteen months after the operation. He has now jaundice and ascites.

REFERENCE.

¹ *Practitioner*, September, 1904.

ON THE TREATMENT OF PERFORATING TYPHOID ULCERS.

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A RECENT editorial article in the *BRITISH MEDICAL JOURNAL* having called attention to the prognosis and treatment of perforating typhoid ulcers, I have determined to record two cases which have come under my care, with a reference to a third case which came under my observation for a short time.

CASE I.

F. W., female, aged 5 years, under the care of the late Dr. Milnes at the Derbyshire Royal Infirmary, admitted on the ninth day of disease. A sister was already an inmate suffering from the same complaint. I was asked to see the case on the fifteenth day of disease, perforation having taken place, as evidenced by a sudden attack of vomiting, collapse, and subnormal temperature about eight hours previously.